Appendix A

Terms and Definitions

Accident analysis (AA)	The estimation of the expected consequence and probability of potential accidents selected for inclusion in a facility Safety Basis Document (SBD)
Accident	An unplanned sequence of events that results in undesirable consequences.
Ammunition	For purposes of this standard, explosives (i.e., bullets) used in rifles, handguns, shotguns, machine guns, and similar devices designed to be carried and operated by one person. Unloaded firearms are excluded from concern in safety basis hazards identification and analysis.
Authorization Basis (AB) Section	A section of the Hazards Control Department's Support and Policy Division responsible for recording the LLNL Safety Basis, maintaining the standards upon which it is based, and aiding in the development of documents compliant with those standards.
Biosafety level (BSL)	There are four levels of containment required to perform biohazardous operations safely. Work practices and techniques, safety equipment, and laboratory facilities appropriate for the operations are based on the potential hazards imposed by the agents used and the laboratory function and activities. BSL levels are addressed in Document 13.6, "Safe Handling and Use of Biological Research Materials," in the *ES&H Manual*.
Change control negative finding	The change control review concludes that the proposed changes are already covered within the SBD, and therefore no additional analysis is required.
Change control positive finding	The change control review concludes that the proposed change is not covered within the SBD, and therefore additional action is required (e.g., elimination of proposed change, additional analysis, additional controls).

Colocated workers	People outside a facility under consideration but within the LLNL fence line. When calculating material dispersions, a minimum distance of 100 m is used due to code limitations.
Committed Effective Dose Equivalent (CEDE)	A measure of the impact of the uptake of any radioactive material into the body.
Consequence	The result or effect of the release of a hazard (radiological, chemical, biological, explosive, or industrial).
Conservative	Biased toward safer conditions.
Credible	Plausible. A credible event in this standard corresponds to an event whose probability is marginal.
Credited controls	Control(s), identified through hazard or accident analysis, that are required to reduce the residual risk acceptance level (see Figure 3).
Event	An unplanned occurrence, sequence of occurrences, or phenomena that may result in a release of hazardous material (e.g., radiological, chemical) or energy.
Expected event	Event could be expected to occur once during the facility or operation lifetime.
Facility management	That set of persons, delegated by the Facility Associate Director owning the facility, that is responsible for operation of the facility within the envelope established by the approved safety basis. See Section 5.4 of Roles and Responsibilities.
Facility	A Laboratory operation, building, group of buildings, or building or operation segment that will neither initiate an accident in, nor have an accident initiated by, another facility. All buildings listed in the LLNL Facility Information Management System database are included in one or more LLNL "facilities."

Hazard analysis	A comprehensive assessment of facility hazards and associated (and primarily unmitigated) accident scenarios that could produce undesirable consequences for the onsite population, the public, or the environment. Included in the analysis are consequence and probability estimation and hazard evaluation.
Hazard identification	A step in the screening process that pinpoints material, system, and process/activity characteristics that can produce undesirable consequences.
Hazard	A source of danger (i.e., material, energy source, or operation) with the potential to cause illness, injury, or death to workers; damage to a facility; or damage to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation).
Hazard ranked facility	Facilities that are ranked either Low, Moderate, or High hazard.
Initial conditions (Also "intrinsic aspects of operation")	Specific assumptions regarding a facility and its operations that are included in unmitigated evaluation. Initial conditions are generally those passive practical limits set by the description of the activity and which are resistant to change by simple human error.
Major modification	Construction that would result in changes to the structural design basis of the facility or to controls credited for segmentation.
Marginal event	Event is not expected to occur, but may occur during the facility or operation lifetime.
Mitigated risk	The estimated risk of an operation when credited controls are operable.
Mitigative control	Reduces the potential event's consequence (impact).

Nonnuclear facility	For the purpose of this standard, a nonnuclear facility is defined as any LLNL-operated building, group of buildings, building segment, or segmented operation that is assigned a unique facility number through the LLNL Facility Information Management System database with the following exception: nuclear facilities categorized as 1, 2, or 3 per 10 CFR 830.
Notification facilities	Notification facilities are facilities potentially subject to a level of exposure from a Low, Moderate, or High hazard facility that could create irreversible injuries or illnesses to workers, or cause the workers' inability to take protective action.
Offsite public	All individuals outside of the DOE site boundary.
Operable	A control is operable if it is capable of performing the safety function assumed in the SBD's assessment of residual risk.
Operational Safety Requirements (OSR)	A document that describes the function and maintenance of credited controls in the form of equipment and administrative controls. OSRs define the minimum conditions necessary to ensure safe operations with respect to colocated workers and the public at a distance removed from the immediate facility. They may include operating limits, testing requirements, administrative controls, use and application provisions, and design features.
Operational-use quantity	The quantity of ammunition assigned to a duly authorized Protective Service Officer for a daily assignment.
Preventive control	Reduces a potential event's frequency (likelihood).
Primary Explosive	UNO Class 1 material listed in Table B.1 of Document 17.1, "Explosives," in the *ES&H Manual* as a primary explosive.
Probable event	Event is likely to occur several times during the facility or operation lifetime.
Process Safety Management (PSM)	Additional safety requirements for facilities whose hazardous materials inventories exceed the quantities listed in 29 CFR 1910.119, Appendix A.

Q List	The Chemical Quantity List contains the Q values used to classify facilities where hazardous chemicals are used. The list is based on the Temporary Emergency Exposure Limit (TEEL) values that are posted on the DOE's Chemical Safety Office website.
Q value	Quantities of each chemical that would cause exposures equal to each of the chemical's TEEL values at specific distances from the point of release, based on standard source term assumptions and using the EPI Code for dispersion calculations under defined atmospheric conditions.
Quantity-Distance (QD)	A process for determining permitted explosives inventory at a location. Required by the DOE Explosives Safety Manual and based on type of explosive, the structure of the facility containing the inventory, and the type of structure that might be impacted by an explosion (e.g., inhabited building, road, power line).
Radiological hazards	Radionuclides in quantities that fall below the thresholds in DOE-STD-1027-92 for Hazard Category 3 nuclear facilities. These hazards, while not required to meet 10 CFR 830 Subpart B, shall meet the requirements of 10 CFR 830 Subpart A and 10 CFR 835, and the requirements of this document.
Residual risk	The operational risk that remains when all credited controls are operable.
Risk binning	The process of categorizing the relative risk of events by assigning the events a "bin" on a frequency-consequence matrix (see Section 2.4.3.1, Risk Evaluation). Risk binning is used as an aid in selecting accidents for further evaluation. It is also part of implementing the graded-approach concept.
Risk Group	A system [developed by the Centers for Disease Control (CDC) and the National Institutes of Health (NIH)] for classifying biological agents by the degree of hazard. There are four risk groups: a larger RG number indicates a higher level of hazard.

Safety analysis	A systematic process to identify and analyze the hazards of an operation, the associated potential consequences and risk of accidents, and the adequacy of measures taken to eliminate, control, or mitigate the hazards, and to document this information.
Safety Basis Document (documentation)	Written documents that establish the safety basis for the facility. Includes initial documentation and changes. Does not include reviews of operations that do not result in changes to the Safety Basis Envelope (SBE).
Safety Basis Envelope (SBE)	The aggregate of activities and hazardous inventories in a facility as analyzed and permitted by the approved safety basis documentation.
Screen-out	Does not require further analysis.
Secondary explosive	UNO Class 1 material listed in Table B.1 of Document 17.1, but not shown as a primary explosive.
Select Agent	A microorganism (virus, bacterium, fungus, rickettsia) or toxin listed in Appendix A of 42 CFR 72, "Additional Requirements for Facilities Transferring or Receiving Select Agents." The term also includes recombinant organisms/molecules that are one of the following: (1) Genetically modified microorganisms or genetic elements from organisms in Appendix B shown to produce or encode for a factor associated with a disease. (2) Genetically modified microorganisms or genetic elements that contain nucleic acid sequences coding for any of the toxins in Appendix B or their toxic subunits.
Standard Industrial Hazards (SIH)	Hazard sources (material or energy) routinely encountered by the general public, or in general industry and construction, for which national consensus codes and/or standards exist to govern handling or use without the need for special analysis to define safety design and/or operational parameters.

Temporary emergency exposure limits (TEELs)	Four levels (0-3) of limits as defined below. When a TEEL level is referred to in this document, it is assumed that the impacts are no greater than the maximum impact allowed for that level. **TEEL 0:** The maximum concentration in air below which most people would experience no appreciable risk of health effects. **TEEL 1:** The maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing anything other than mild transient adverse health effects or perceiving a clearly defined objectionable odor. **TEEL 2:** The maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action. **TEEL 3:** The maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing or developing life-threatening health effects.
United Nations Organization (UNO)	The UN has developed a world-wide standard for labeling dangerous materials.
Unmitigated risk	The risk involved with a facility and its associated operations, assuming there are no credited controls. Only initial conditions and the basic physical realities of a given operation are considered.
Workers	Individuals either immediately adjacent to or within the occupied area of hazard, or outside the occupied area of hazard but within the site boundary. Colocated workers are a subset of the latter group.